No. 63.
No. 27500.

Field Book

of

Willis Linn Jepson

If lost finder please
return and receive reward.

1943

11 Mosswood Road,
Berkeley, California

– "F. B." = Jepson Field Book.
– "Men and Manners" Jepson Private Journal, vol. and page as indicated.

Moraga Ridge, Contra Costa Co., Oct. 13, 1943. 1

No. 27,500. Castanopsis chrysophylla A.DC. var. minor Blk. Moraga Ridge, Oct. 14, 1943. Leaves of many shrubs of this have been eaten by insects. The burs are now falling spontaneously. Many have fallen.

The shrubs are totally out of flower. Only one shrub was found with some catkin-clusters.

Burs have partly lost their nuts, partly still hold them. The nuts are mostly a little 3-sided and so recall in flat-sidedness the nuts of Castanea sativa.

The pistillate flowers

Moraga Ridge, Contra Costa

still have scale like inflorescences with no sign of a coming "bur".

Pinus attenuata. The ovulate catkins are still of the same size as when formed last spring. Probably they will not start to grow into cones until the egg-cell is fertilized, about next March maybe. The male prothallium is now growing slowly towards the embryo-sac or area of future embryo-sac, probably taking a year after the dissemination of pollen (microspores) before final fertilization.

Arbutus menziesii. The hanging clusters of old

dead leaves (turned downward below the new growth in June) still persist in part on the trees.

This trip today with Dr. H.M. Wheeler. Returning home via Moraga Valley we stopped a moment in the valley to watch a machine shucking Persian Walnuts. A fascinating kind of operation. A draper with thickly set steel teeth on it; erect teeth. The walnuts are scrubbed quite clean!

Little Oak, Vaca Valley, Oct. 15, 1943.

Observed Populus fremontii in the Pallejo Hills. cf. "Happy Days at Little Oak Ranch, vol. 2, p. 64.

Vaca Valley, Oct. 17, 1943
Solano Co.

– drove today to Little Oak in Vaca Valley. On the way we stopped alongside the salt marsh at (½ mi. e.) Cordelia.

✓No. 27,501. *Aster exilis* Ell. This composite formed a colony on a "dump" where soil had been run into the salt marsh by an artificial water stream. Its flowers are pink. Cordelia, Solano Co.

✓No. 27,502. *Epilobium paniculatum* Nutt. A marked colony with preceding. 1½ to 5½ ft. h. Cordelia, Solano Co.

No. 27,503. (*Centromadia* = *Hemizonia*) *fitchii* (Gray) Greene. Dry hills at Thomasson, Solano Co.

✓No. 27,504. *Vinca major* L. Thomasson. See page 5.

Gates Cañon, Vaca Mts.
Solano Co. Oct. 17, 1943.

✓No. 27,505. *Quercus dumosa* Nutt.

[– *Vinca major* L. Cont. from p. 4. This formed a colony under a *Quercus agrifolia* tree – a dense pure colony of circular outline surrounded by dry grass at this time.]

[Although given no care *Vinca major* has persisted in the garden at Little Oak for over forty years.]

– Two miles back in Gates Cañon in "wild" native vegetation are noted the following intruders:
Centaurea solstitialis.
Marrubium vulgare.
Foeniculum vulgare Hill.

— Segregia. Integrity of gems. of Sys. Bot. note book, 1:33.

— Cont. from p. 1 at *. The burs have mostly fallen. They form a carpet in some places beneath the bushes. On August 15, Dr. H.M. Wheeler was on the ridge some "found it in a stage of great activity. Everywhere one's eye was at once attracted to the large spiny green clusters of fruits crowning the chinquapin along with the delicate flower clusters"; in Litt. Oct. 14, 1943. Is mid-August the normal time of bloom for chinquapin?

— Dr. Irma E. Webber, Riverside, one of my former graduate students, called on me, at my lab., Oct. 8, 1943.

Moraga Ridge, Oakland Hills.
All coll. by H. M. Wheeler. Jan. 16, 1944.

No. 27,506. Arctostaphylos

No. 27,507. Arctostaphylos

No. 27,508. Arctostaphylos.

No. 27,509. Arctostaphylos

No. 27,510. Arbutus menziesii Pk. showing fl. buds in winter stage.

No. 27,511. Alnus rhombifolia Nutt

No. 27,512. Castanopsis chrysophylla A.DC. var. minor Blk. Styles now thrust out from the buds!

No. 27,513. Pinus attenuata Lem.

— Re. the above collection, see H.M. Wheeler in litt. Jan. 17, 1944, Wheeler Correspondence.

Helen Zimnavoda

Central Jr. High School, Los Angeles.

The above is a bright young Russian woman whose family escaped from Russia during the development of the Bolshevik Revolution, in 1922. Her father was a Russian physician, her mother a dentist. She herself, on reaching this country, in time graduated from the University of Chicago and has been teaching in the Los Angeles Schools where she became acquainted with Dr. A. K. Grant of the University of Southern California who sends her to call on me this

day, January 31, 1944. She is extremely well-informed about world conditions socially and believes that America will not be ruined by inflation. I learn the other way, since it will take only a little inflation to ruin those of us with fixed incomes. We also discussed, in the most amicable manner too, the lack of culture in the Universities of America. This woman believes we are in a transition period only; I am in fear of its permanence or in fear of retrogression and a lowering standard of living.

Berkeley, Feb. 4, 1944

Today I noticed two Live oaks (Quercus agrifolia) of the original stand on the campus were overturned in the same direction north of the Woman's Faculty Club, by the South drive. As they lay, uprooted, there was the appearance of their being overturned by a heavy southeaster wind. But we have had no such wind. The trees were of the smaller adult trees with narrow crowns. Somehow the feeling persisted that I did not know the full story of the fall of these trees.

At southwest corner of Life Sciences Building an oak (of the native campus

oaks) has been taken down. Its trunk is extremely sound. There is some rot area on one side but not enough to affect the stability of the tree. The wood is denser and the grain finer than usually seen in our oaks. The tree stood, like two others near it, in a "well". Why it was taken down is not obvious.

Another tree, out on the lawn south of the south west entrance to the Life Sciences Building, fell — maybe two weeks ago.

— Feb. 4, 1944. —

(See also "Berkeley College" note book 2:77.)

— Attended meeting today of History of Science Club as guest of Howard S. Reed. Speaker was Prof. Geo. F. K. Link, Prof. of Plant Pathology, Univ. of Chicago. He talked on Theophrastus whose treatise De Causis Plantarum has never been fully translated into English. By the aid of a Greek he has been translating it.

His discussion took a wide and quite profound range as to the beginning of ideas about plants. H.M. Evans presided. Present: S. J. Holmes (Zoology); R. H. Lowie (Anthropology); E. O. Essig (Entomology); W. F. Meyer (Astronomy); W. C. Blasdale (Chemistry); C. W. Porter (Chemistry); H. B. Torrey; V. F. Lenzen (Physics); J. R. Moffitt (Regent). cont. p. 13.

Reed told me at the luncheon table (the meeting, p. 12, was a luncheon) that he had been down to see McDougale (D. T.) at Carmel. He said they examined the fire-injured redwoods in Palo Colorado Canon. One tree which had a broad girdle cut on its trunk kept alive by means of a vigorous crown shoot a short distance from base of trunk. Such trees develop long weeping branches. Reed says they keep true as propogated vegetatively.

Professor Link was a pleasant man to meet. Reed and I joined him at Life Sciences Building and we walked together to the Faculty Club. He has been here only since Feb. 28 as I understood, but has been to visit the redwoods at Bull Creek. He said he would not have

Berkeley, Mar. 4, 1944.

missed them for a great deal. Whereupon I told him about the founding of the Redwoods League, its early days and in what way we secured Bull Creek, the finest area of all. Also about the Rolling Grove and the starting of the movement for memorial groves. After the luncheon I offered to take him to my great show place, Moraga Ridge. But he said he was leaving the next day.

Eastern Solano County

Mar. 12, 1944.

– Drove today with Dr. H.W. Wheeler to Fairfield, thence east on Suisun road, thence east on county road (north of Denverton), for about two miles where we got into trouble in wet road. The hind right wheel simply spins in a soft place and it seemed as if we were in for indefinite trouble when we spied an auto coming from the direction we had come. Dr. Wheeler went to get help. The driver of the auto pushed my car onto solid ground and then backed my car one hundred yards to a point where the car could be turned. The man is a sheep farmer here, Howard Petersen. He was most considerate and helpful. His father is Marcus Petersen.

We went back to the road forks, turned south to Denverton,

left the highway in a half-mile or so, drove east over country roads, low rolling hills, gravelly soil, until reaching the north-south Dixon-Rio Vista highway, where we turned north. About two miles south of Dozier sta., on low moist ground we collect:

No. 27,514. Blennosperma californicum T. & G. It dominates a plowed strip inside a field, the plowing having been done last season as a fire-guard. Beyond the fire guard, on the unplowed plain, there do not appear to be any plants. This plain is an uncultivated area cut regularly each season by the hoofs of sheep and cattle. This constant tramping by cattle seems to favor the alien weeds; but the plowed strip produced conditions suitable for the native plants. —

Dozier sta., c. 2 miles s. Rays 13, 10, 8, 8, 8, 8, 8, 8, 8, 8, 11.

No. 27,515. Arenaria californica Bnw. In open ground, on moist flat, quite conspicuous, there being little other vegetation. Associated with the preceding, but the preceding in lower spots or little ditches. Dozier sta., 2 mi. s.

No. 27,516. etiolated seedlings of a grass too young for identification. discarded.

This plant filled pools with floating leaves. It could not well be Isoetes, nor Lilaea. And yet its old fronts, clinging to the root, recalled Lilaea. The base of the leaves are sheathing with a membranous ligule where blade joins sheath! Dozier sta., 2 mi. s. I do not recall any any grass that enters pools in just this way, although there are plenty of aquatic grasses. It must be a grass.

Eastern Solano Co., March 12, 1944.

no. 27,517. Callitriche marginata Torr. Pool in the hills, — a spring pool — Montezuma Hills, 2 mi. se. of Denverton.

Benicia Hills, Apr. 21, 1944.

— drove to Little Oak, Vaca Valley, Tuesday, Apr. 18. Returning to Berkeley on the following Friday I collected at head of American Cañon in the Benicia Hills, the following:

no. 27,518. Orthocarpus faucibarbatus Gray. Sacs sulphur-yellow. Abundant colonies on a moist slope*, yellowing the place. [gentle]

— drove to Little Oak, Vaca Valley, Tues., Apr. 25. Country in fine spring dress. Returned to Berkeley on Thursday Apr. 27. Collected a Downingia 2 mi. sw. of Vanden in a low field. cf. no. 27,529. A dry year dwarf! see p. 24.

* head of a "valley" swale in the hills. A little valley flat with sloping sides.

Berkeley Hills, May 1, 1944.

no. 27519. Castilleia foliolosa H. & A. Woody based, forming a low shrub really, the woody part 1 to 1½ feet high. South-facing slope on dry hill near Five-Pines Point. Stem at base 6 to 7 lines diam., still continuing to form tiny fascicles of leaves, the leaves 1 or 2 lines long! (Cont. p. 20 at top).

no. 27,520. Carex

Open hillslope, seepage spot, at head of Strawberry Cañon.*

no. 27,521. Polystichum munitum

This fern grows in very bottom of Strawberry Cañon above Cherry Patch on bank of the stream.

no. 27,522. Prunus emarginata Hook. At Cherry Patch, just under Sugar Loaf, in bottom of Strawberry Cañon.

* Cont. p. 64.

– Castilleia foliolosa, cont. no. 27519. Leaves, the primary ones, a little involute on sides so as to be a little channeled above.

Berkeley May 6, 1944.

– Dr. Carl Epling is here on his Delphinium work. With him is Harlan Lewis.

San Jose, June 1, 1944. – Drove to San Jose with Dr. A. A. Beetle to spend the day with J. Francis Macbride. Beetle said he sold his collection of Carex to the Dudley Herbarium for $100.00. Also said Thos. Just of the Midland Naturalist is not a Catholic which was a surprise to me. See a full account of this trip in Men and Manners, vol. 17, p. 110-127; see also vol. 13, p. 478.

– I drive to little Oak, Napa Valley on May 12, 1944. Country extremely green for so dry a year! – From Pelly's Hill. Lathyrus watsonii White, Buff Pea, is now flowering abundantly against the orchard fence along the east lane. It has increased. Echinocystis fabacea Naudin is extremely abundant along the same fence line. (Cont. page 24).

No. 27,522. Wyethia angustifolia Nutt. This species is abundant in a large field, east side of road, east side of Napa Valley about 7 mi. n. of Napa. One looks over this level a long distance and sees great colonies of this species now in full flower. Bracts of involucre about 22. Cont. p. 24.

No. 27,523. Galium

Young fruits; quite glabrous. along base of foothills 4 mi. e. of Rutherford.

No. 27,524. Vicia.

Valley fields, 7 mi. n. of Napa, e. side of valley. Ten years ago this was a rarity. Now, one sees it everywhere about the valley; near St. Helena; on Sanitarium road.

No. 27,525. Filago
Fields, c. 7 mi. n. of Napa, east side Napa Valley.

No. 27,526. Vicia
Uncultivated land, 7 mi. n. of Napa, E. side of Napa Valley.

No. 27,527. Collinsia bicolor Bth.
Valley at west base of Adam-and-Eve Ridge, Howell Mt. Upper pair of stamens with a free (!!) process at base 2.5 mm. long.*

No. 27,528. Orthocarpus attenuatus Gray. Valley flat at west base of Adam-and-Eve Ridge, Howell Mt. Grassy field.

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* This is filament-like, an extension of filament, and pubescent. Upper pair of filaments, upper pair, with spreading-hirsute hairs — not dense. Lower pair glabrous. But the
— cont. p. 23 top.

upper pair, as to lower portion, well described as hirsuto-ciliate. It is not a thin or scattered hirsutoness; nor is it dense.

- drove to Napa Valley from Berkeley (see p. 21) and up the hill to the Sanitarium. In the afternoon with my companions, Mr. Roscoe Wheeler and Dr. Helen M. Wheeler, drove up to the little valley at west foot of Adam-and-Eve Ridge, where we collected nos. 27527 and 27528. Afterwards, down east side of valley. The collecting station for 27,522 is a great field almost in front of the great winery (stone) at foot of hills east side of valley, about 2 miles south of Stag's Leap road. Branch

– Cont. Wyethia (no. 27,522). Papp
anus or scales broadly subulate:
some fls. with 6 (4 long, 2
short), some fls. with only 1!

No. 27,529. Downingia

Lower half of corolla-lobes
of lower lip light blue, the upper half
white; the palate with a quad-
rate velvety-purple spot; the
lobes of upper lip acute, erect,
the sinus between them deeper
than the lateral sini between
the lips. Tip of anther-
column with 2 short bristles
For place and date of collection
see p. 18, near bottom of page.

Little Oak, Vaca Valley,

– Cont. from p. 20. draping its climb-
ing stems over the posts, barb wire
and fence boards profusely. It is
increasing. The day is a glorious
one. There are no black gnats. The
apricot trees show promise of a
heavy crop this summer.

June 15, '44.

– On Tuesday, June 13, drove to
Little Oak in Vaca Valley. On Thurs-
day, June 22, drove into Gates Canon
and left my car at the first
canon forks. There is a dwelling
at that point. It is now occu-
pied by A. L. De Braga*. When
I stopped my car on the little
flat he came across the road
and began to talk. A long resi-
dent of San Francisco, he is
now gratifying a long desire to
live amongst scenes of wild-
ness, where there are trees
and flowering brush and bloom-
ing plants. He is very talkative
and for a foreigner or maybe
first generation American he talks
well. When I explained to him
that I was a botanist he was

* P.O. Box 669, Vacaville

sympathetic, appreciative and understanding to a certain degree. He has purchased the Jim Miller place up canon and means to live there in time. I could have driven up to the Miller place easily but on account of the rains the day before I thought the road might be in bad shape. It was in good shape. Nor would I have met a car, as no one lives up canon just now.

I walked up to Jim Miller cabin, hoping to find Pentstemon heterophyllum in flowers. Did not find it at all. I went on up canon a short distance by a good cleared road, good for walking, but it suddenly stopped against dense chaparral

with no possible way through. I went back, a short distance below Jim Miller cabin and took the left hand fork of the road which works by zig-zag-curves up the ridge on north side of canon. This is a good horse and wagon road, or good for a light-auto. Finally it gains the top of the lateral ridge. On the ridge it runs west towards the main mountain summit of the Vaca Mountains. On this lateral ridge are the following plants composing the chaparral:

Quercus dumosa.
*Adenostoma fasciculatum.
*Hypericum concinnum.
*Lotus scoparius (3 ft. h. in chaparral).
Arctostaphylos manzanita
*Erodictyon californicum (E. glutinosum)
*Pickeringia montana

* = in flower

Lateral ridge, south of Gates Canyon, (Collins Ridge). Vaca Mts., June 15, '44.

*Sphacele calycina.
*Castilleja foliolosa.
*Calochortus pulchellus. This is scattered through the chaparral on the slopes and goes quite to the top of the ridge.
Helianthella californica (main) Scattered through the chaparral; now out of flowers.
Zygadenus californica.
Rhus diversiloba.
Ceanothus cuneatus.

I move along this ridge towards the (main ridge) summit. A few small "openings" appear on ridge and extending down the south slope a little. To the left, under the main summit ridge is an open broad swale, heavily chaparral-

June 15, 1944
Collins Camp, Vaca Mts.

wooded, but a bit diversified by taller clumps of Umbellularia californica and Quercus species. The area looks attractive. The road, now getting near to the summit-ridge, forks: one fork goes left into the head of the area just-described; the other fork goes right (north) behind a little brush-covered hill on which stands a cabin. Behind the hill (west) the road leads to a little clearing in which apple trees are planted and where one sees on the ground the roof of a one-time cabin, which I take to be Collins Cabin. This spot, as I remember, is Collins Camp of my early-day field notes. Here the road stops, but I find a trail on northerly side of clearing which leads

through the brush to the summit of the main ridge. This I gain. I go along main ridge trail to the broken elevation in the ridge called Mt. Vaca by George Davidson of the U. S. Coast and Geodetic Survey. When the ridge trail reaches or is blocked by this rocky elevation it passes to the left along the side hill, keeping its elevation. A great amount of wall rock work in places supports this trail. I am surprised at the amount of labor expended on it, a trail not much used nowadays. I pass through a gate and after a bit climb the very steep brushy wall to the summit of Mt. Vaca. On the summit I note the

following species:

Quercus dumosa.

Quercus chrysolepis. One individual, quite conspicuous, standing on the west wall near summit - but in a place where I could not safely reach it, to get a bit of its foliage. But I had no doubt of it. It was a dense tall rather narrow shrub.

Castilleia foliolasa

Rhus diversiloba

Galium (no.).

Umbellularia californica

Pickeringia montana

Eriodictyon californicum (? glutinosum)

Photinia arbutifolia.

Monardella

Adenostoma fasciculatum.

Splacela calycina.

above Gates Cairn.

Helianthella californica.
Diplacus glutinosum.
Chlorogalum pomeridianum.
Baccharis pilularis.

I tried hard to find a trail from the summit of Mt Vaca down south to the ridge trail below the rocky point, but was unable to pick up one. I was forced to descend the west wall to the built trail.

This built trail may well run along ridge northwards until it joins the wagon road at summit of Weldon Canion. On the very summit I also found:

Wyethia (no.)

I return by the built trail (cf. p. 32), pass through the trail gate once more, and soon reach the ridge at its summit, that is, I am once more on the divide. Here, as I turn and look north I see a faint trail leading right to summit of Mt. Vaca. I follow it only a short distance, just far enough to make sure it goes in that direction. It is probably badly brushed over, since the country seems to have no one in it now.

I go south on ridge trail to the point where the trail comes in from Collins Camp clearing, return on this trail to Collins Camp. The first plant to repossess the clearing is Eriodictyon californicum. Next Ephacele calycina. Salvia

spathacea is also here, in fl. It is all through the chaparral from the lower slopes in Gates Cañon.

I go on back to Gates Cañon. In this cañon I list:

* Clarkia concinna
* Clarkia elegans
* Sphaeralcea calycina, lavender corollas.
* Ceanothus californica
* Calycanthus occidentalis
Cercis occidentalis (its fruits coloring the shrub)
Aristolochia californica, a colony of it, the stems trailing over the ground under the Umbellularia californica trees at Miller Cabin.
Umbellularia californica. A colony of it in cañon bottom, near Miller Cabin, nearly quite pure, continuing for about ⅛ mile; ground very clean beneath!

* = in flower.

I go on down to my car and pass down lower cañon. On an outer hill, very near the Vaca Valley floor, is a hillside colony (south slope) of Eriodictyon californicum. It is the only chaparral species here, the hills otherwise bare of shrubby growth. It is nearly opposite the Brazelton ranch house on cañon floor.

It is notable that from the beginning of the chaparral, all the way to the summit, the chaparral species are the same. Calycanthus occidentalis and Cercis occidentalis about do not leave the cañon bottom.

In the cañon between the main forks and Miller Cabin is a file of Alnus rhombifolia. Tallest trees 60 feet high.

Old Signal Sta., Vaca Mts
June 15, 1944.

From this point is a most extended view. One commands the great Sacramento Valley north to and beyond the Marysville Buttes which like islands in a sea. Faintly I discern eastward the Sierra Nevada foothills — or maybe not — the day is so hazy. Westward, all the ridges are in view, south to Mt. Tamalpais, west to the ocean and

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Gates Cañon, Vaca Mts.,
Solano Co. June 15, 1944.

No. 27,530. Agoseris grandiflora
Wooded slopes.
In lower cañon below Miller Cabin.

No. 27,531. ~~Brassica~~ Cardueae
In upper cañon, above Miller Cabin.
An introduced species.

No. 27,532 A Filago
On Collins Ridge, south of upper Gates Cañon.

Vaca Mts., Solano Co., June 15, '44.

No. 27,532 B Linum
On summit of the ridge, near Old Signal Sta. site.

No. 27,532 C Galium
At site of old Signal Sta., summit of the ridge.

No. 27,533. Wyethia helenioides
(DC.) Nutt. With 27,532.

No. 27,534. Helianthella californica
Gray. Collins Camp.

Berkeley, July 24, 1944.

Ale of Joe. Grinnell's plants from Lassen County in 1928 are well-labeled as Pentstemon oreocharis, Battle Lake, 6200 ft., Lassen Co., Calif. June 26, 1918. But his folders never (I think) in this collection, carry his own name. I had his name written on folders when they came into me* Just now I have checked back to Mus. Vertebrate Zoology to make sure! Grinnells field books are elaborate!!

* Cont. p. 53.

Moraga Ridge, Contra Costa Co.

— Drove to Moraga Ridge via Orinda. Parked car in usual place in the north saddle and climbed thru the brush to top of ridge.

Adenostoma fasciculatum, stray flowers.

Dendromecon rigida, stray fls.

Photinia arbutifolia, in full fl.

Castanopsis chrysophylla var. minor. Many shrubs in full flower.

— Quercus chrysolepis — a small colony of pine trees midway of ridge on east slope of summit in a swale at head of a cañon. Trees about 30 ft. h.

No. 27,535. Castanopsis chrysophylla A.DC. var. minor Gth. Stamens 10, 10; calyx 5-lobed.

No. 27,536. Lotus junceus Otley.
In Claremont shale on ridge.
See notes with specimen.

No. 27,537. Psoralea
On north slope, north end of ridge, in a little open in the brush.

— Pinus attenuata Lemmon.
We (Dr. H.M. Wheeler and I) met Mr. H.E. Wales, head janitor in Life Sciences Building, Berkeley, on the ridge. He lives in the little colony at Madrono station. He says 500 trees of Pinus attenuata were overthrown by the great north wind of ?Feb. 2, '44?

— Lotus scoparius Otley. See no.

Moraga Valley, July 23, 1944.

No. 27538. Polygonum

Dense pure colony in low spot (now dry), west side of Moraga Valley, near Moraga Pass.

Stem hirsute with ascending hairs, markedly but thinly. Sheaths likewise hirsute. Sheaths with interrupted bands above the sheath

Napa Valley, July 30, 1944.

Drove from Berkeley to Howell mt. with Mr. Roscoe Wheeler and Dr. H.M. Wheeler. After a conference at Saint Helena Sanitarium with Dr. Edward Hoehn, went up to Four Corners. Here we had luncheon under an oak tree and collected:

No. 27,539. Cordylanthus pilosus Gray. See notes and sketches with spms. Howell Mt., Four Corners.

No. 27,540. Solidago californica Nutt. Dry slope, openly wooded. Four Corners, Howell mt.

Napa Valley, July 30, 1944.

No. 27,541. Agrostis diegoensis Vasey (det. Beecher Crampton, 8/17/)

This grass grows in dry ground in the open meadow. Four Corners, Howell Mt.

No. 27,542. Calycadenia multiglandulosa DC. ssp. cephalotes (DC.) Keck

Dry ground in the meadow or flat below Four Corners, Howell Mt.

No. 27,543. Linum sperguliunum Gray See notes with spms.

In open dry ground, meadow below Four Corners, Howell Mt.

No. 27,544. Eschscholtzia interbus L.

Roadside, forming a blue band for about a mile. 3 mi. so. of Yountville, Napa Valley.

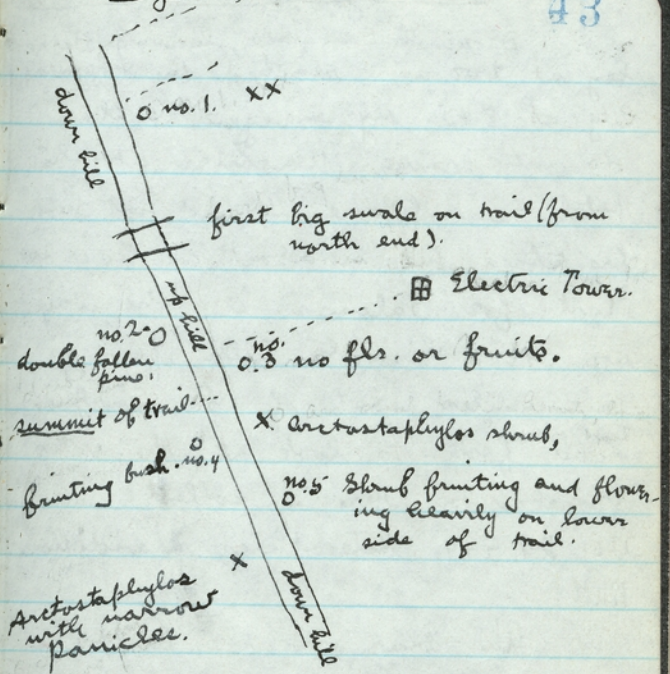
No. 27,545. Boisduvalia densiflora (Lindl.) S. Wats. In a low spot. 3 mi. se. of Yountville, Napa Valley.

Moraga Ridge, Oakland Hills

No. 27,546. Arctostaphylos
Embryonic panicles
broader than high, much-branched, pinkish. About 18 in. h. shrub. Bracts ovate, short, acute; not acuminate. No berries.

No. 27,547. Arctostaphylos
Closely forked narrow panicle, reddish. Few. Bracts ovate, acuminate, longer than in preceding. Berries on bush.

— On the ridge 1/4 mile south of the wagon parking place, a number of Castanopsis chrysophylla var. minor shrubs were tagged as to fruiting or non-fruiting condition. See p. 43.



No. 27,548. Lotus scoparius Ottley.
Collected at same time and place as L. juncens Ottley, no. 27,536, for comparison with it. See p. 39 ante.

— Weeds. Annual loss from, yearly, 3 billion dollars. U. S. Chamber of Commerce. — Bot. Review, 10: 279

Berkeley to Salinas, Oct. 10, '44.

Drove to San Jose, leaving Berkeley at 7.00 a.m., reached the Garden City at 8:45. My engagement there was with Francis Macbride at the Hotel Saint Claire. He had not had breakfast, but in about an hour we start for Salinas. On the way we stop in the hills four or five miles west of the San Juan road fork to look at the native vegetation. Here I collect:
No. 27,549. Heterotheca grandiflora Nutt.

We drive over the hills, then down into the Salinas Valley to Salinas and go to the Hotel Jeffrey for a mid-day. After which we meet Dr. A. E. Hildreth, in charge of the Guayule Investigations, U. S. Bureau of Plant Industry, and Dr. Read Rollins, of Stanford University, who

Salinas, Oct. 10, 1944.

is on this project. From Salinas we were driven out into the valley, past the headquarters buildings of the project, to the guayule plantations, where experiments and cultures are being made on a vast scale. Field after field, none less than 80 or 160 acres we entered where demonstrations were made for us and the origin of hybrids explained, with explanations of their objectives and difficulties involved. Other species of Parthenium, other than P. argentatum, are being used to some extent.

I was impressed by the vast scale of things. On our return we stopped at headquarters and were guided through the laboratories where work is being done in cytology, anatomy, pathology. Various demonstrations were made here. Here,

Salinas, Oct. 10, 1944.

in one of the laboratories I met my friend Dr. F. W. Hazeis.

In their attack on the problem of developing a rubber plant or strain from their Parthenium argentatum population, I was much impressed with the scientific ability and soundness of Dr. Hildreth. I was also impressed by the scientific honesty and directness of Dr. Rollins.

The great extent of the laboratories and their equipment is also to be remarked.

After which we visited the Hotel Jeffrey for refreshments. Then, thanking our hosts we drove back to San Jose where I passed the night at the Hotel Sainte Claire. In the morning we, Macbride and I, went to call on Dr. and Mrs. William H. Wright, he the late

San Jose to Berkeley, Oct. 11, '44

Director of the Lick Observatory, and an old-time college friend. We also saw Mrs. Armstrong, sister of Mrs. Wright, daughters of Judge Leib, early resident of San Jose. The old Leib place is on The Alameda. After a mid-day meal Macbride came with me to Berkeley.

Vaca Valley, Oct. 19, 1944.

No. 27,550. Asclepias speciosa Torr. From colony at Little Oak, in the apricot orchard. A collection of pod-bearing branches sent Dr. R. E. Woodson, Oct. 19, 1944, at Missouri Botanical Garden.

Moraga Valley, Oct. 27, 1944.

No. 27,551. Polygonum nubilen Bergii Watz. In a deep ditch; also in field, probably wet in winter. Plants in field not flowering this season. See 27,538.

Oct. 27, 1944. Moraga Ridge

(cf. p. 43 ante)

The tags on shrubs having in part disappeared a new method was begun. Stakes are driven down by a shrub or tree and numbered:

Stake 1. East side of trail: Castanopsis chrysophylla var. minor. Shrub, heavily flowering and fruiting in 1944 season.

Stake 2. East side of trail. Castanopsis chrysophylla var. minor. No fruits; no fls. in 1944 season.

Stake 3. East side of trail. Arctostaphylos
Heavily fruiting, Oct. 27, 1944.

– Pinus attenuata. The tree below trail which had several abnormal clusters – large clusters – of ovulate catkins observed in spring and through summer. Last previous observation Aug. 5, 1944. At that time catkins about 3/4 inch long. Today cones half-grown, about 3 1/4 inches long. That is, growth to 3 took place probably in October, beginning in Sept.

No. 27, 552. Arctostaphylos
This is the bush at Stake 3. See p. 48.

– Erechtites arguta DC. The effect of the flower head before it opens is red. Either the involucre or flowrs are red. The colonies form a nurse crop for seedling. – Humboldt Co.

— Miss Winifred Walker, English woman, flower painter, called today at my laboratory. She has done work for the London Horticultural Society. It seems that Wm. R. Dykes (The Genus Iris. 47 colored drawings. 30 line drawings. 1913), induced the Society to make a record of new things horticulturally (new species or new garden cultures) by colored illustrations. So, Miss Walker was employed to make paintings. She did this for several years. It seems that she also made a series of illustrations in identification of Shakespeare's plants — the plants mentioned in his plays. For this work, in recognition of it, she was elected an honorary member of the Linnean Society, London.

Her headquarters in Cal.

are in Los Angeles (3912½ W. 6th st.) but she has been making illustrations for men in the College of Agriculture at Davis, W. W. Robbins and others.

She explained that she made just paintings of the flowering plant in the large — no botanical details. She does not go in for morphological figures at all. I had that idea of her work from seeing a collection of her California wild flower paintings* which had been left for a time with some professors in the College of Agriculture here at Berkeley. I understood her to say that she had done some plates for the Botanical Magazine (which plates require details — but may have been done by another hand). For

* Quite like those of various Cal. wild flower painters.

a more intimate note regarding this visit see Men and Manners 16:101.

— Miss Susan G. Stokes, the monographer of Eriogonum, has not been around the herbarium in some time. A few days ago I saw her on Telegraph avenue, using crutches and getting along very feebly. —

Dec. 10, 1944.

— Today John Thomas Howell, Calif. Academy of Sciences, called. He has been persuading Miss Eastwood to write an autobiography and she is doing so. Since 1914 Miss Eastwood has lived in a little cottage on Russian Hill — a small place, very simple, heated only by burning wood, I think Howell said only two rooms. She has not changed her habits

with age to any degree. Here lately, however, she no longer comes to the Academy on Saturdays.

I took Howell to the Black Sheep for a mid-day dinner. The dinner was a very good one. We had much talk of various kinds. — c. Dec. 20, 1944.

— J. Grinnell. Continued from p. 37. However, I find that some of his folders were distributed to families without his name being added. I checked back, as said p. 37 ante, to make sure the plants were Grinnell's.

— Just called today Robert Burton who had his botanical training with me in the Forest Botany Laboratory about 1914. He is just back from the South Seas (New Hebrides) where he has been working as a botanical expert with our troops. Although

he had had no experience with tropical plants he was enabled to identify with very meagre literature 150 species of forest trees. The troops are first of all put into a "Jungle School" and taught military operations in the jungle. Also many other things. Burton's job was to teach them the kinds of harmless trees, the kinds of poisonous trees, the kinds of food trees, so that they would be enabled to live if cut off from food supply. Burton identified about 20 food trees. — Jan. 18, 1945.

Burton had one pamphlet on the trees or useful plants of the South Sea islands. He took with him from California a copy of my "Manual"! which he insisted was useful. — Jan. 18, 1945. Cont. p. 56.

— Dr. Harold St. John, Prof. of Botany in the University of Hawaii

called Saturday, February 3; on the next Monday, Feb. 5, he came again to take dinner with me mid-day. He is just back from Colombia, South America, where he has been working under the Foreign Economic Administration, a U. S. War agency, on Cinchona*. He called in at Washington to get his discharge, went to Cambridge to see his mother (still living but quite aged). He saw his former teacher Dr. M. L. Fernald whom he admires and with whom he gets along capitally. He did not go to the Arnold Arboretum. There is no way to reach it in the winter with the snow on the ground by any public conveyance. He says Dr. J. M. Johnston frequently comes to the Gray Herbarium but none of the other Arboretum men. He gave me the impression that Johnston follows pretty much his own

* See p. 63.

Berkeley, Feb., 1945.

bent at the Arnold Arboretum.
St. John said [— Feb. 24, 1945.
Arnold's eyes have developed cataract and that he has to use a magnifying glass to see an herbarium specimen. He also has heart trouble and can no longer climb mountains. While on his field work in Virginia (see his account at great length in Rhodora) he went always in a car, everywhere, depending on his legs for only a few yards. One would not suppose that from reading his narrative.
[or anything of the kind — Feb. 24, 1945.

— Cont. from p. 54. I expressed some astonishment he had taken along my Manual as useful in so strange a tropical region; but he claimed getting a great deal from it that was useful.
— Cont. p. 63.

Moraga Ridge, March 10, 1945, Contra Costa Co.

Went to Moraga Ridge today with Dr. H.M. Wheeler. While there is poverty of species on the ridge, there is, nevertheless, always something new to be observed:

— Pedicularis densiflora Bth. Little clumps of it, here and there, are now pushing upward. Some of the little colonies are now in [early anthesis.

— Ceanothus sorediatus H.&A. is now in early inflorescence buds; that is the buds are obvious. In a swale, about midway of the ridge, on east side of trail.

— Vaccinium ovatum Pursh. A few fls. on one bush.

No. 27,553. Ceanothus cuneatus Nutt. In splendid early flower, the shrubs in a tiny colony in a swale south of the swale noted above for C. sorediatus. The umbellate clusters

are small for the species.
No. 27,554. Lotus junceus (Bth.)
Greene. The plants grow on the ridges in the driest shale. The branches from or near the root-crown spread horizontally, making low (flat-crowned) plants but not prostrate or even decumbent. The plant is like an herb in appearance and texture. Its herbage is soft. In reality it is a soft shrub or bush. It is evergreen! How many years leaves persist? Two years apparently. Has there been growth this season? Apparently but I did not feel sure. On old growth the peduncles persist as slender dead stubs! The next year after there has been flowering at a given axils adventitious buds may produce one or two leafy shoots. What I take to be the leafy shoots of this season carry no

peduncles. There seem to be two season's leaves; the fresh young leaves made this winter and a few old leaves or older wood, these latter larger, thicker and far less vividly green.

— Arbutus menziesii Pursh. Its panicles just appearing on one tree. We note a few seedling trees in the last swale south.

— Baccharis pilularis DC. In the swales.

— Pinus attenuata Lemmon. One sees an occasional young tree 5 or 6 ft. high. I have never seen a stand of young seedlings. Seedlings come mostly in the shelter of chaparral I think.

Napa Valley, March 28, 1945.

Drove today to the Saint Helena Sanitarium from Berkeley. The flowering on the hills seemed desperate, — dwarf individuals of

Napa Valley, March 28, 1945.

the annuals and perennial herbs. On the floor of the valley, east side, opposite Yountville, there were good colonies of Platystemon californicus. A bit south (1/8 mile) of the Yount School in a low flat was a fine colony of Nemophila atomaria. It is so different in appearance from Nemophila menziesii that in the field one likes to think it different specifically. It is not found in Vaca Valley, eastward, which has N. menziesii.

Southeast of Yountville about 3 miles a golden buttercup in the fields looked at a distance like Caltha, namely:
No. 27,555. Ranunculus

– Drove to Vaca Valley on March 30, 1945. Several fields between Cordelia and Vanden were solid

Vaca Valley, Mar. 30, 45.

sulphur-yellow with Orthocarpus ricanthus. They are small fields where the primitive conditions as to soil have persisted. But these fields are examples of the flowering of this species that extended (in early days) all over the country side, valley flats and low hills, for miles.

At Little Oak the first faint signs of swelling (winter) buds of the fig trees are visible. There is maybe a slight change of tone in the crowns of the naked Juglans hindsii grove. The Bartlett Pear orchard is in full luxurious flower. The apricot orchard is past flowering. The Valley Oak is just beginning to leaf slightly; but the Blue Oak, Quercus douglasii, in the Araquipa Hills, is now covered with young yellowish foliage.

– Earl Purdy died Aug. 8, 1945 at Ukiah.

Saint Helena, July-Aug., 1945.

— In the field north of Bale Lane, the entire area, after the hay is taken off, is rank with Vicia villosa. Never before have I seen so much of it! Usually I have noted only scattered plants.

— On north slope of hill at stone bridge over Napa River, directly east of Saint Helena town (Howell Mountain road runs east at foot of hill) is a rather dense mixed wood-land: Pinus ponderosa, Pseudotsuga taxifolia, Arbutus menziesii, Quercus agrifolia, Acer macrophyllum.

— Quercus lobata Née. Bursts in foliage, in March probably, from winter buds with mostly compact leafage. In August (or late July) the branchlets produce slender somewhat fern-like shoots with scattered leaves. This second leafage is in striking evidence on many trees in Napa Valley, about Saint Helena.

Berkeley, Sept., 1945.

The same phenomenon was also noted on the tree at Little Oak in Vaca Valley, probably in July.

— Cont. p. 56. I had the feeling that my students do better than I can do or might do myself!

— Cont from p. 55. He worked under Fosberg. It seems that foresters were sent for field assistants. They did not prove satisfactory. They had no training in identifying Cinchona trees in the field and especially the different varieties of Cinchona which vary

Berkeley

greatly in quinine content or quality. So Fosberg asked for botanists, demanded that botanists be sent him. They were sent and did the work. cf. article in Science about this time.

Feb. 24, 1945.

— Cont. from p. 19. Trailed up Strawberry Cañon, main cañon, under Sugar Loaf to Cherry Patch; on up the slope in upper basin, back over hill north of Sugar Loaf on opposite side of cañon and down to Botanic Garden. All this country had in the old days good open trails through the brush — now all choked and overgrown, very difficult indeed to get through.

Sept. 9, 1945.

mar. 16, '45.

— Dr. D. T. MacDougal; dinner in his honor. cf. account in Men and Manners, vol. 19, p. 142.

— Cupressus macrocarpa Hartw. Who first collected it?

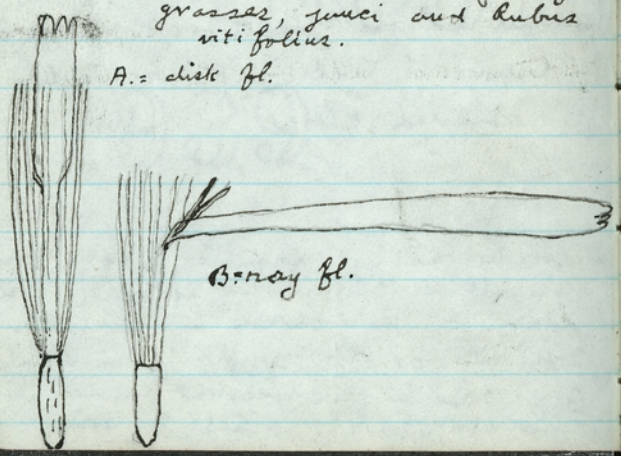
— At her earnest request I called on Miss Alice Hilgard in reference to the matter of publication of the memoir of E. W. Hilgard's life, written by him in his last years. See a full account in Men and Manners, 17:199. Sept. 9, 1945.

drove to Point Reyes peninsula from Berkeley via Fairfax and Tocaloma (see p. 72.) Crossed the Inverness Ridge with its nearly pure forest of Pinus muricata and drove down into the hollows westerly, thence over the low rolling hills, utterly barren, save for occasional small clumps of willows in the bottoms.

No. 27,556. Aster

Low hills, in a tangle of grasses, juncí and rubus vitifolius.

A.= disk fl.



B.= ray fl.

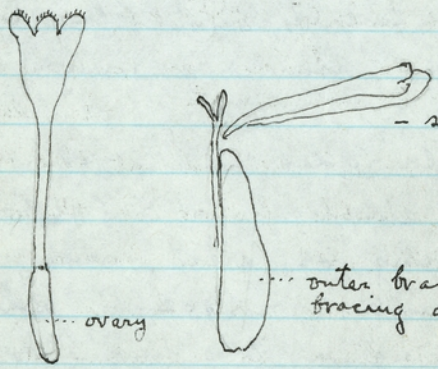
Ovary very lightly pubescent. Pappus of ray flowers shorter than pappus of disk flowers. Leaves microscopically pubrcent, sessile by a clasping base, the base sagittate-auriculate at the angles. Stems subglabrous or with a scobiculate line decurrent below each auricle. Rays 25, 23, 16,

Rays lavender, disks yellow. Stems simple, 4 to 5 feet long, ascending or erect, arising from a branched rootstock. Rootstocks producing at this time slender pink, scaly winter buds 1½ (to 2) inches long.

It is my supposition that these flowering stems, tall, unbranched, are annual, that is dying down to the ground (and the rootstocks) each season at end

of season, but I find only slight underground evidence of such behavior in previous seasons.

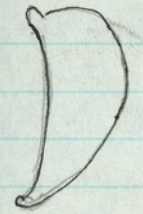
No. 27,557. Hemizonia



– see p. 71.

Ovary very lightly and thinly hairy. Inside the outer bracts a thin involucre cleft into lobes about half way. Or, its bracts united about half way. Rays quadratish – obovate, 2 lines long, shortly 3-lobed. Rays 15, 14,

14. Stem diffusely and freely branching, 1 to 1½ ft. high. Cor. lobes densely ciliate-margined. Anther-column black. Flowering branchlets filiform or nearly so, their leaves linear, sessile, 3 to 6 (or 7) lines long. Leaves of stout main stem 2¼ inches long, pinnately 5-(11-)lobed, the lobes remote, the blade on a very long petiole, or approximate. Stem leaves all gone or withered at this time. A remarkable feature is the filiform branchlets with green leaves now functional; the stem leaves all gone at this time or nearly – at least brown and withered.



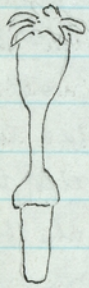
achene: ray flower; (glabrous).

Continued p. 71.

Point Reyes Peninsula.

Leaves and involucres glandular-hairy, the stem and branches thinly hairy. Along roadways only; not seen in fields; perhaps introduced on peninsula.

No. 27,558. Chrysanthemum segetum L.



Disk-flower: base of corolla-tube abruptly expanded, fleshy and covering top of ovary like a hood!

Ovary glabrous! Cor. glabrous or subglab.

Bracts of involucre with membranous tips. Leaves with hastate or auriculate bases. Herbage glabrous. Peduncles inflated towards apex! Erect annual plant. A few plants by roadside. Rays yellow,

Sept. 23, 1945.

Achene rounded-flattish dorsally, the ventral side with 2 planes, thus a little 3-sided.

Achene of ray: narrowly winged on one side "a", obscurely winged on other "b" margin.

Achenes longitudinally 5 to 10-ribbed.

In this material "the lateral angles" are not few-toothed

- Cont. no. 27,557.

- ligule of ray corolla.

Marin County, Sept. 23, 1945.

The drive down the beautiful Papermill Creek is still very beautiful. I knew it long ago when the country was primitive. Although a part of it is now lined with cottages, it is still a highly attractive drive on account of its setting of trees: Big-leaf Maple; Red Alder; Coast Live Oak; Madroño; California Laurel; Redwood; Douglas Fir. - Cont. from p. 66.

Hills sw. of Nortonville,
Contra Costa County, Oct. 14, 1945.

Drove via the Tunnel Road into Contra Costa County with Roscoe Wheeler, class of 1892, and his daughter Helen-Mar Wheeler.

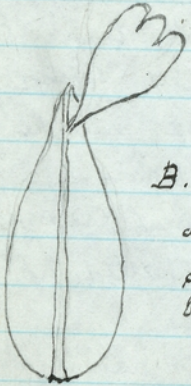
All the way to Walnut Creek the hills country is being settled up as suburban villages.

Drove through the walnut-orchard country of San Ignacio Valley to the village of Clayton. Here, turned off highway on dirt road running into hills northeasterly. The road climbs fairly high into hills quite splendid in barren-ness, at least barren on south slopes. Drove the car into a tiny gully on right-hand side of road, north slope of hills, just to get it off the road, and here we had lunch. This spot is (Cont. p. 78)

Hills sw. of Nortonville, Contra Costa Co.

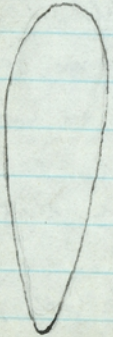
No. 27,559. Logopappa

Cont. p. 79.



B. Bract strongly infolded and completely covering achene, very much flattened fore and aft. Bracts of circle 5.

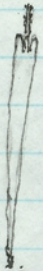
A. Outer circle of bracts, bracts 5, densely villous dorsally, subglabrous ventrally.



C. Achene. Strongly flattened fore and aft*, smooth and glabrous. Achene of "B". Not same scale as "B".

* See p. 75

D. circle of 5 inner bracts



E. Sterile flowers inside D. = cluster of 5.

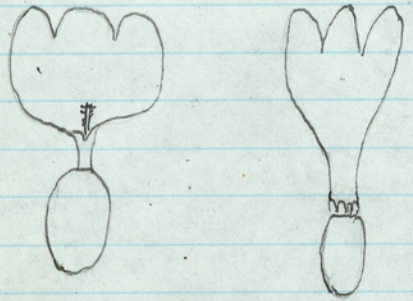
Corollas of "E" narrow, attenuately slender towards base! Post anthesis, the rays of the marginal corollas approximately deliquescent over central cluster of flowers and apparently somewhat twisted, their bases green-herbaceous and obscuring from achene when deliquescent.

* Cont. from p. 74. No! The truly mature achene is flat or flattish dorsally, ridged ventrally with a bi-planed surface.

Rays of corollas about 1, to 1¼ lines long.

Hills sw. of Nortonville, Contra Costa Co.

No. 27,560. Hemizonia



Fl. A. - Ray corolla. Fl. B. — disk - corolla

Rays 3; ligule broader than long, 1½ to 2 lines long, yellow.

Disk - fls. 3; corolla broad.; pappus - scales ovate, serrate, short.

Ray - achene covered on back to edges of ventral face by subtending bract; ventral face naked

Herbage strongly aromatic, perhaps with slight turpentine odor.

Achene: ventral face flattish, dorsal face strongly rounded, its apex at inner angle with a small apiculation.

No. 27,561. Grindelia camporum Greene.

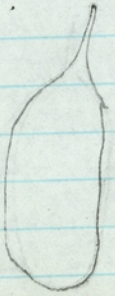
Dry hillsides.

Ovary with 2 bristles, one at each lateral angle; ray ovaries with 4 bristles, two at each lateral angle.

Some plants (2 to 2½ ft. h.) with persistent woody stems 12 to 14 inches high.

No. 27,562. Picris echioides

Body of achene densely tomentulose ventrally; glabrous or nearly so dorsally.



cont. p. 78.

Beak of achene very slender. Subtending bract thinly warty and short-bristly. Beak of achene rather short.

— Cont. from p. 73. at a point which commands a fine view of the hills northerly and the great gully northerly. Easterly are two fine hills, high, imposing, with extremely abrupt southerly or south-westerly slopes, both burnt over this year and having a glowering magnificence.

About 300 yards beyond our lunch place is a splendid Aesculus californica grove on the steep north slope. Up slope, by this grove are three fine Live Oaks in a row up hill, presumably Quercus agrifolia.

Followed the high slopes and came to a steep down grade, running down into a great canyon which separates the hills we are in from the two great dark hills just spoken of. In the bottom of this canyon we find a paved road. To the right it runs to Somerville. We turn left and in a mile or so are at Nortonville, a much-scattered settlement of three houses. Pretty soon we strike the highway from Pittsburg which to the left goes over the hills sw. to Concord. This is called the Donovan Road on my road map. It would seem to be the old road known as the Willow Pass Road.* We go back to the Ignacio Valley by it and return to Berkeley.

* No! Willow Pass road runs nw. directly from Concord.

— Cont. from p. 74, no. 27,559. The outstanding result from my study is that the cenual cluster of flowers wither in a close tuft. Over this tuft the

Cont. p. 80

Cañon near Somersville, Contra

ray ligules converge and deliquesce in a sort of twisted hood.
Cont. p. 85.

No. 27,563. Gutierrezia

Leaves linear-filiform, or linear-involute (channeled on lower side), thinly pubrulent with short spreading points.

Ray ovaries with ovatish pappus scales; disk ovaries with linear scales, 2 of them longer than the others, or the scales unequal.

Heads 4-5 lines long.

Involucres ovoid, its bracts imbricated in 2 or 3 rows.

Leaves puncticulate or not very obviously so. Herbage resinous. Not

Leaves thinly scabrulous.

Ray pappus shorter than those of the disk.

Bracts coriaceous, their green tips large or minute, usually

with the middle bracts most markedly green-tipped. Pappus-palea, 10 (!), of disk 11 (!), 8 (!), 9 (!)

Pappus-palea of ray: 8, 4, 8, 7.

Rays 8, 8, 9, 8.

Ray-pappus very unequal, shorter than disk-pappus.

No. 27,564. Artemisia californica Less. Spotting the south slope in cañon below Somersville. Ovary and lower part of corolla-tube with glandular granules. Branchlets densely white-tomentulose. ↑ and closely

— Drove with D. Wheeler from Berkely over the Donovan Road to Nortonville. Climbed hill S.E. of Nortonville on dirt road to summit and down into Somersville. In cañon just below Somersville, on road to Antioch, collected no. 27,563 & no. 27,564. Developed a tire (Cont. p. 86)

No. 27,565. Lessingia

Corolla yellow, cleft deeply on inner sinus so as to appear as if ligulate, – in reality the 5 lobes equal. This statement applies to outer corollas of head. The corollas of inner fls. of head are regular or subregular.

All lower part of plant, stems and leaves, tomentulose. Involucres: their bracts glandular-pubescent, their tips turned outward, set with prominent translucent glands. Upper reduced leaves with a few black glands near tip. Upper portion of plant, i.e. inflorescence, subglabrous or thinly pubescent.

– Drove to Antioch today with Dr. H. M. Wheelan. Sand Hills much changed by man.

No. 27,566. Croton

Staminate 11, 12, 12, 12.

No. 27,567. Heterotheca

Ray-flowers: ovary glabrous, pappus none. Disk-flower: ovary pubescent, pappus bristly, of 2 kinds (see below). Rays 18. Involucres glandular-pubescent. Rays yellow, aging reddish-brown. Inner pappus-bristles long, in a dense circle; outer pappus-bristles very short, unequal, somewhat obscure. I see no difference between the copious long bristles, save in being "scabrous", and the short outer ones. A few of the short outer ones, though extremely narrow, suggested slightly as if they were palaceous. However, I prefer the term short-bristly. These short outer ones do not appear to be scabrous.

Antioch Sand Hills

No. 27,568. Chenopodium anthelminticum L. Stamens 5 (or 4).

No. 27,569. Senecio douglasii DC. Bush, 3 ft. h., markedly woody for 2 ft. or nearly. Rays 13, 10, 12, 9, (Cont. p. 85).

No. 27,570. Oenothera pallida Lindl. var. calif. formica (Wats.) Jepson. When in anthesis the stems and branches bear only primary leaves. In midsummer, or in fall, there develop rosettes of leaves at the ends of sterile branchlets, and with smaller rosettes along the length of the branchlets or branches. The plant is plainly perennial by means of underground organs. The capsules spread almost or quite horizontally, or a little ascending. They

are 1 3/4 to 2 1/4 inches long; they are markedly thickened at base and tapering gradually to pointed apex; they have a rounded thickened rib over each of the four sides of the capsule, so that the capsule is in a way rounded with channels between the ribs (that is, over the partitions).

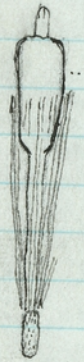
– Cont. from p. 84, no. 27,569. furbuce with a calyculate series of linear-lanceolate bracts at base. Rays yellow, linear. Cont. p. 86.

– Cont. from p. 86, no. 27,559. Rays 5, pale yellow, quadratish, 3-toothed. Probably in fl. only at night. Style-brushes with short spreading glandular bristles.

Antioch.

- Cont. from p. 81. leak at this point and drove out to Antioch where the wheels were changed.

- Cont. from p. 84. No. 27,569.

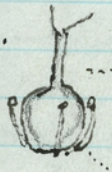


A dense circle of soft pappus bristles, the bristles barbellulate but only microscopically and obscurely so. A short series of bristles at base.

Ovary puberulent

This material well described by diagnosis in Manual, 1149.

No. 27,571. Salsola Kali L. var. tenuifolia G. F. W. Mey. Bract and bractlets ovate to ovate-lanceolate, all membranous-margined on sides, spinose at tip. Bractlets fleshy-thickened in center. Calyx membranous at early [green-herbaceous] stage or it were better to say coriaceous, since soon becoming coriaceous. Anthers on long filaments, the filaments in age converging around style.

A. 

In a younger flower, "A" I find very short stamens. Apparently the stamens elongate markedly after anthesis, or rather the filaments. The "long filaments", noted above, appeared not to have anthers. Describe the bracts and bractlets

Grand Island, Nov. 11, 1945.

as follows: Bracts and bractlets ovate-acuminate, prickle-pointed. The bractlets are not always "narrower" (see Man. 333) than bract. The ovary is not "imperfect" in anthesis stage but soon after. Correct Man. 333.

- Down into the delta region of the lower Sacramento Nov. 11, as far as Grand Island.

- Cyperus cardmenlus T. A lot of it on "Levee Road" on Sherman Island.

- John Thomas Howell came to see me today at my home. He told a strange story re. George Neville Jones of the University of Illinois and a proposed exchange of specimens to the California Academy of Sciences without previous

notice or advice. See details in Jepson, Men and Manners, vol. 16, p. 167.

— Jan. 29, 1946

— My old-time friend Dr. Herbert John Webber died on Jan. 18, 1946, at Riverside, Calif., He had been ill only since the previous Saturday. He sent me a Christmas letter at Christmas and a short time previously he had written, saying he was writing on his memoirs. — Feb. 21, 1946.

- Called on me today at my home, 11 Rosewood Road, Berkeley, Dr. Irma Webber of Riverside, one of my former graduate students. — Feb. 21, 1946.

— Rules for Borrowing, Gray Herbarium. See "Gray Herbarium", Jepson Correspondence, vol. 46, index.

Nomenclature

As authorities for binomials, how abbreviate the following?

Greene.

Abrams.

Howell.

Parish.

– Persoon, Synopsis, pars ii dated 1807. "Its first section was issued in the autumn of 1806" as shown by a review in Regensb. Bot. Zeit. v. 321 (21 Nov. 1806). – cf. Rhod. 47:197.

If some one were to assert that the reviewed copy was a solitary advanced copy, how could it be proved or disproved? Or if they were proof sheets?

– Problem of vars. Proc. Linn. Soc. 150 Sess. 192. 1938.

– Into their camp [that of the horticulturist] no sane botanist goes. – Linnaeus, Phil. Bot. cf. Rhod. 47:379.

– Linnaeus, Nature of a "Character". – cf. Rhod. 47:375.

– Artemisia dracunculoides Pursh (1814) var. glauca (Pall.) Munz, Man. 575, 601 (1935). cf. Rhod. 47:248. (1804)

– Populus euphratica Olivier subsp. denhardtiorum Englar (1898) Populus denhardtiorum (Engler) Dode. 1909. Celtis ilicifolia Engler. 1905. Populus ilicifolia Boulean. 1945. Here is a case of going to an entirely different family to take up the first specific name. cf. Rhod. 47:362.

– Nature herself has not produced genera; perhaps not even species x x x if you consider those royal battles of botanists as to what should be considered as species." – Roemer & Schultes; cf. Rhod. 47:371.

– Antennaria plantaginifolia (L.) Richards. var. planifolia Crongist, in Rhod. 47:182. (tagini) 1945

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Books

- Wulff, E.V., Historical Plant Geography.
- Erdtman, G. An Introduction to Pollen analysis.

Botanists

- Arthur Cronquist, N.Y. Bot. Garden. Antennaria

CROCKER FIRST NATIONAL BANK
OF SAN FRANCISCO
ONE MONTGOMERY STREET

1946	SUN.	MON.	TUE.	WED.	THU.	FRI.	SAT.
JAN			1	2	3	4	5
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1946	SUN.	MON.	TUE.	WED.	THU.	FRI.	SAT.
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FOR YOUR CONVENIENCE USE
Mailway Banking

Field Notes

- Orthocarpus purpurascens B&H. "White" & "red" in separate patches at Kawsah; do not flower at same time. — R. Hopping.
- Purlong, H. W. 1919 Alameda Padre Sierra, Santa Barbara.
- David S. Holmes, Calistoga.
- Geo. E. Stone, Carmel. (Photog.).
- Dorothea G. Edgar, 318–16th st., Sacramento.
- Albert E. Thompson, 532 Echo ave., Fresno. (Salix)
  New address: Northfork, Madera Co.
- Roger M. Drake, San Luis Obispo Co. Dept. Ag. (worked with yellow star thistle.)
- Goethe, Chas M., 3731 T st., Sacramento. (Capitol Natl Bank Bldg., 7th and J.)
- Linum bicarpellatum. Middletown (3–4 mi. E). ? toothed stamen-cup. Butts Cañon
- Hoffmannia linnosa; along railway st. of Valley Home (Thalheim). fl. May or early June. NZ. Stanislaus Co.

How abbreviate?

Howell.
Greene.
Parish.
Abrams.
Clokey.
Newsom.

Field Notes

- Herbarium of F. M. Cata - Flora of San Diego County. Desert Region.
- Hardin Irwin, Kelseyville.
- Guy Fleming, within one mile of Camp Callen, (lives) San Diego Co.
- Scott Mountain Lodge, 4400 ft., in Scott Mts. betw. Mill and Mule Creeks, Siskiyou Co.
- Green Valley, 8 mi. w. of Placerville. Follow country roads. Springtime botanizing.
- Frank W. Gould, Compton Junior College. 601 S. Acacia st., Compton.
- H. W. Person. - When he first came to call at my lab. "Are you going to give your plants to Univ. Herbarium?" Parish dinner: Han. Hall's query.
- San Joaquin Range Experiment Station. H. H. Biswell.
- Forester and Fire Warden, 624 North Spring St., 4th Floor. Los Angeles.
- Herbert Stockton, Native Plant Nursery, San Jose.
- Herbarium of the Museum of Northern Arizona.
- Lindon D. Sowell, 1436 Eldorado St., Klamath Falls, Ore. (Brother-in-Law of James Davis).
- Indian Gulch Quadrangle, Mariposa Co. A good foothills quad. to explore.
- Eumanus angustatus. La Jota and Arguimas Mdns., Howell mt. May 8; May 18.

FROM THE FIRST NATIONAL BANK

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1944	SUN	MON.	TUE.	WED.	THU.	FRI.	SAT.
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Rachel Einav

Seaweeds of the Eastern Mediterranean Coast